

## Number System Questions with detailed Solutions PDF

Number System questions are a very common type of questions asked in almost every competitive exam. These questions carry a weightage of 2-3 questions (4-6 marks) in SSC exams. To get a good rank in competitive exams, you should have a great practice of variety of questions of Number system

Here are some tips for solving Number System questions: Understand prime numbers, factors, multiples, LCM, and HCF thoroughly. Practice divisibility rules for quick checks. Tackle questions systematically, eliminating wrong choices in multiple-choice questions. Practice with previous exam papers to familiarize yourself with question patterns.

So, we have attached 10 questions of Number System for you to practice with. You should aim to solve these questions in less than half a minute for each.

## Practice Questions on Number System

You can also download the Number System questions and answers pdf. Just click on the **Download PDF** button. So let's start with the very first question.

**Q:1** If "x" is in a digit such that 46942x is divisible by 11, then "x" is equals to:

1. 3
2. 1
3. 5
4. 8

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) A basic one! These type of questions are very common

**Q:2** In a circular path, 6 men start running at 4 o'clock in the evening from the same point with the speed of 6, 8, 12, 7, 14 and 10 km/hr respectively. If the perimeter of the circular path is 105 km, find the second time at which they meet.

1. 12 PM
2. 8 PM
3. 12 AM
4. 8 AM

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Try using short tricks, they will save your time

**Q:3** Find the least number which must be added to the number 25272 to get a perfect square.

1. 8



**5 LAKH+ STUDENTS**  
Already enrolled with our selection focused courses.



**30+ EXPERT INSTRUCTORS**  
Our instructors are the best in the industry



**10000+ HOURS OF VIDEOS**  
All videos are well-explained for you to get every bit out of the videos

## Number System Questions with detailed Solutions PDF

2.  $\sqrt{9}$

3.  $\sqrt{81}$

4. 81

(**Difficulty:** 2, **Estimated Time:** 10 Seconds) This was an easy one! Did you get it right?

**Q:4** A number is divided by 6 leaves remainder 3. What will be the remainder when square of this number is divided by 4?

1. 3

2. 1

3. 2

4. 0

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) This was a test of your concepts!

**Q:5** The LCM and HCF of the given numbers are in the ratio 10 : 1. If the product of the two numbers be 1440, find the largest number.

1. 60

2. 120

3. 48

4. 240

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) We're halfway through. Have you got all your questions correct so far?

**Q:6** If 35269N is divisible by 11, then find the possible value of N.

1. 6

2. 3

3. 0

4. 11

(**Difficulty:** 4, **Estimated Time:** 30 Seconds) This was a hard nut to crack, be prepared for such questions in exam!

**Q:7** Find the sum of digits in tens place in all the even numbers lesser than 100.

1. 225

2. 235

**Number System Questions with detailed Solutions PDF**

3. 245

4. 250

(**Difficulty: 3, Estimated Time: 20 Seconds**) If you have a good understanding, you might have wrapped it up in 10 seconds!

**Q:8** If the HCF of the two numbers is 4 and the product of these two numbers is 224. Find the LCM of numbers.

1. 14

2. 28

3. 56

4. 72

(**Difficulty: 2, Estimated Time: 15 Seconds**) This was an interesting question!

**Q:9** If a five-digit number  $a2a5a$  is divisible by 11, what is the value of  $(a^2 - 2a)$ ?

1. 0

2. 8

3. 15

4. 24

(**Difficulty: 3, Estimated Time: 20 Seconds**) Be ready for such questions in your exams!

**Q:10** Q is the smallest natural number such that it leaves a remainder of 3 when divided by 11 and 4 when divided by 9. What will be the remainder when Q is divided by 7?

1. 2

2. 3

3. 4

4. 5

(**Difficulty: 2, Estimated Time: 15 Seconds**) This was an easy one. Did you guess them all correctly?

## Answer Key

Let's check out your score in this test.

## Number System Questions with detailed Solutions PDF

1. (3)	2. (4)	3. (3)	4. (2)	5. (1)
6. (2)	7. (1)	8. (3)	9. (4)	10. (1)

Comment below your score, considering each question has 1 mark only. If you scored 8 to 10, congratulations! You are one step closer to selection. If you have scored 5 to 8 marks, then you are doing well, keep it up. If you have scored less than 5 marks then you need to work a little harder on this subject. But don't worry, we are here to help you master the subject.

Let's check the answers and solutions and try to find out what went wrong.

## Answers and Solutions

**Q:1** The correct answer is **option 3** i.e. **5**.

Divisibility based

Formula:

Take  $x = 0$  and divide the whole number and on the last pair ADD the required number which is completely divisible by 11

Given:

46942x is a number

Take pair of numbers from unit sides and SUBTRACT from the unit side of each to one another and which pair has x is the multiple of 10

$46942x = 46$  and  $94$  and  $2x$

$2x = 2 \times 10 = 20$

$94 = 4 - 9 = -5$

$46 = 6 - 4 = 2$

Total =  $20 + 2 - 5 = 17$

After 17 the number is divisible by 11 is 22

So,  $22 - 17 = 5$

**Q:2** The correct answer is **option 4** i.e. **8 AM**



**Number System Questions with detailed Solutions PDF**

The speed of 6 men are = 6, 8, 12, 7, 14 and 10 km/hr

The perimeter of circle = Distance = 105 km

LCM of their speed = 6, 8, 12, 7, 14 and 10 = 840

i.e. 1st time they meet after 840 km

Time Taken =  $(840/105)$  hr = 8 hrs

2nd time they meet after =  $(2 \times 8)$  hr = 16 hrs

So, 2nd meeting after 16 hours from 4 o'clock evening = 4 PM + 16 hr = 8 AM

**Q:3** The correct answer is **option 3** i.e  $\sqrt{81}$

The given number is 25272

$$15^2 = 225$$

$$150^2 = 22500$$

$$16^2 = 256$$

$$160^2 = 25600$$

The square root of given number is between 150 and 160.

$$159^2 = 25281$$

Required number to add =  $25281 - 25272 = 09$

$$\sqrt{81} = 09$$

Hence, the least required number to add is  $\sqrt{81}$ .

**Trick:-** For squares between 151 and 175.

Ex-

$$159 = 159 + 59 = 218 \dots\dots(i)$$

The number is subtracted by 150 (base) and squaring the result.

$$(159 - 150)^2 = 9^2 = 81 \dots\dots(ii)$$

The number is subtracted by 125

**Number System Questions with detailed Solutions PDF**

$$(159 - 125) = 34 \dots\dots(iii)$$

now

Multiply by 100 in both eq (i) and (iii)

$$(i) 218 \times 100 = 21800$$

$$(ii) 81$$

$$(iii) 34 \times 100 = 3400$$

Add (i), (ii) and (iii)

$$\text{we get, } (21800 + 81 + 3400) = 25281$$

**Q:4** The correct answer is **option 2** i.e. **1**.

Dividend = divisor  $\times$  quotient + remainder

If a number N is divided by 6, gives x as a quotient and the remainder is 3.

$$\text{Then, } N = 6x + 3$$

After squaring,

$$N^2 = (6x + 3)^2$$

$$N^2 = 36x^2 + 36x + 9$$

Since 36 is divisible by 4 the remainder will be 0 and when 9 is divided by 4, the remainder will be 1.

$$\text{Remainder} = 0 + 0 + 1 = 1$$

So, the remainder is 1.

**Q:5** The correct answer is **Option 1** i.e. **60**

If LCM and HCF of two numbers are given then

$$\text{LCM} \times \text{HCF} = \text{one number} \times \text{another number}$$

Let the LCM be 10x and HCF be x

$$10x \times x = 1440$$

**Number System Questions with detailed Solutions PDF**

$$10x^2 = 1440$$

$$x^2 = 144$$

$$x = 12$$

Thus HCF = 12, LCM = 120,

Such possible factors of 1440 are 24 and 60

Therefore, the larger number will be 60.

**Q:6** The correct answer is **option 2** i.e. **3**.

Divisibility rule of 11 → Sum of odd places digits - Sum of even places digits = 0 or multiple of 11

35269N,

At odd places = 3, 2, 9

At even places = 5, 6, N

Sum of odd places = 14

Sum of even places = 11 + N

$$11 + N - 14 = 0$$

$$N = 3$$

So, N = 3

**Q:7** The correct answer is **option 1** i.e. **225**.

Number of even numbers between 0 – 9: 4

The tens digit of those numbers = 0

Number of even numbers between 10 – 19: 5

The tens digit of those numbers = 1

Number of even numbers between 20 – 29: 5

The tens digit of those numbers = 2



## Number System Questions with detailed Solutions PDF

Number of even numbers between 30 – 39: 5

The tens digit of those numbers = 3

Number of even numbers between 40 – 49: 5

The tens digit of those numbers = 4

Number of even numbers between 50 – 59: 5

The tens digit of those numbers = 5

Number of even numbers between 60 – 69: 5

The tens digit of those numbers = 6

Number of even numbers between 70 – 79: 5

The tens digit of those numbers = 7

Number of even numbers between 80 – 89: 5

The tens digit of those numbers = 8

Number of even numbers between 90 – 99: 5

The tens digit of those numbers = 9

Total sum =  $1 \times 5 + 2 \times 5 + \dots + 9 \times 5 = 225$

**Q:8** The correct answer is **Option 3** i.e. **56**.

HCF  $\times$  LCM = product of two numbers

The product of two numbers = 224

& their HCF = 4

LCM =  $224/4 = 56$

**Q:9** The correct answer is Option 4 i.e. 24.

For a number to be divisible by 11, Sum of odd digits – Sum of even digits = 11m

$3a - 7 = 11m$



**Number System Questions with detailed Solutions PDF**

$$a = (11m + 7) / 3$$

a should be a number from 1 to 9

The only value of m = 1

$$a = 6$$

$$\therefore (a^2 - 2a) = 6^2 - 12$$

$$\Rightarrow 24$$

**Q:10** The correct answer is **Option 1** i.e. **2**.

$$\Rightarrow Q = 11m + 3 = 9n + 4$$

$$\Rightarrow 11m - 9n = 1$$

Checking for m = 1, 2, 3, ... for which there exists a natural number 'n' satisfying the condition

For m = 5,

$$\Rightarrow n = 6$$

$$\Rightarrow 55 - 54 = 1$$

$$\therefore m = 5$$

$$\Rightarrow Q = 55 + 3 = 58$$

When Q is divided by 7, the remainder is 2 ( $7 \times 8 + 2$ )

So, this is it for today. We will meet again with another new topic. Till then, you can practice the questions again by downloading the PDF of Number System.